

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 28-30 and 48-64 are pending in the application.

Applicant thanks the Examiner for the analysis presented in the Office Action.

Election/Restriction

The Office has imposed a restriction requirement under 35 U.S.C. § 121, contending that the application contains three patentably distinct inventions, including:

- I. Claims 1-14, 24-27, and 31-47, drawn to maintaining session date between two computers, classified in class 709, subclass 227.
- II. Claims 15-23, drawn to storing network session data on remote computers, classified in class 709, subclass 223.
- III. Claims 28-30, drawn to organizing multiple requests' session data in a network, classified in class 709, subclass 228.

An election to prosecute Group III, claims 28-30, was previously made, allowing the Office to withdraw from consideration the claims of Groups I and II. This election is hereby affirmed. Further, claims 1-27 and 31-47 are canceled without prejudice to expedite prosecution, and these claims will be pursued in one or more divisional applications.

1 **Claim Rejection under 35 U.S.C. § 102**

2 Claims 28-30 stand rejected under 35 U.S.C. § 102(e) as being anticipated
3 by U.S. Patent No. 6,098,093 to Bayeh et al. (hereinafter, "Bayeh"). Applicant
4 respectfully traverses the rejection.

5 **Claim 28** defines a stateless distributed computer system, comprising:

6 a network having one or more network components to route
7 requests from a first endpoint device to a second endpoint device and
8 to route replies from the second endpoint device back to the first
9 endpoint device, wherein at least one reply contains state
10 information pertaining to the second endpoint device; and

11 the network being configured to maintain the state information
12 and to reassociate the state information with a subsequent request
13 from the first endpoint device to the second endpoint device.

14 As recited in claim 28, the claimed stateless distributed computer system
15 includes a network between two endpoints and the network is configured to
16 maintain the state information, rather than the state information being kept at
17 either of the two endpoints. As described in one exemplary implementation in the
18 subject application, with reference to Fig. 8 (reproduced below) and
19 accompanying text beginning on page 17, a network system 800 has a first
20 endpoint device 802 and a second endpoint device 804 interconnected via a
21 network 806. The network 806 consists of one or more specially configured
22 computing devices whose task is to route messages between the endpoint
23 computing devices 802 and 804. The network computing devices may include
24 routers, hubs, relays, repeaters, satellite uplinks and downlinks, RF transceivers,
25 and the like.

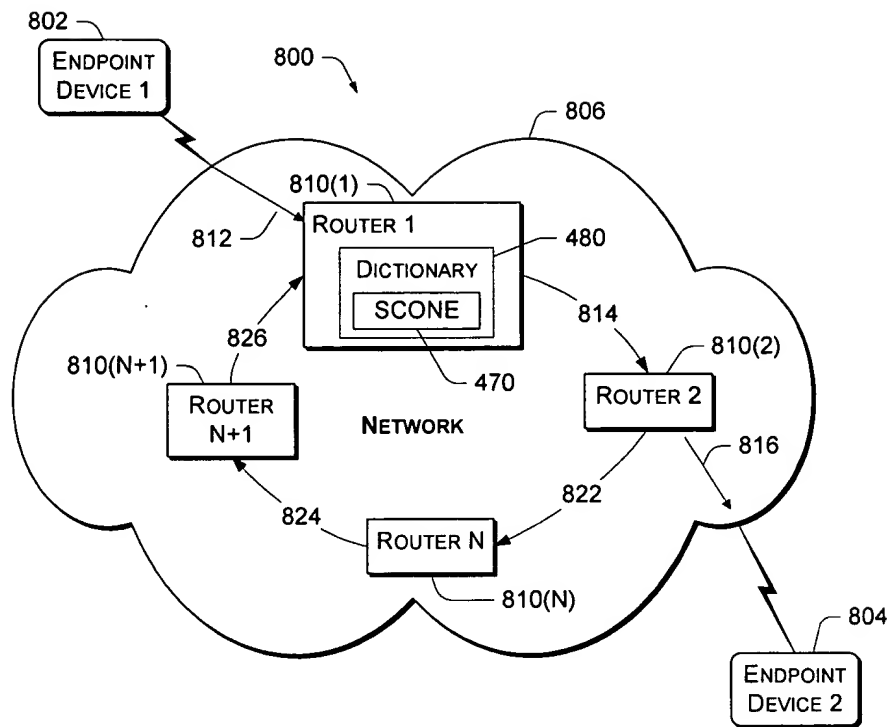


Fig. 8

A message may be routed, for example, from the first endpoint 802 to the second endpoint 804 through routers 810(1) and 810(2) along path segments 812, 814, and 816. Suppose the second endpoint 804 responds to the request by returning a reply packet that contains a “state-caching object for a network element” or “SCONE” 470. The reply packet may be routed back to the first endpoint 802 via the same or different path through the network 806.

Rather than caching the SCONE 470 on the first endpoint 802 or second endpoint 804, the network 806 keeps the SCONE 470 on behalf of the two endpoint devices 802 and 804. According to one implementation, a network component copies the SCONE 470 from the reply packet and stores it. This is represented in Fig. 8 by the SCONE 470 being stored in router 810(1) in a

1 dictionary 480 by service ID. If the first endpoint device 802 subsequently sends
2 another request to the second endpoint device 804, the router 810(1) notes the
3 reuse of the service ID and reattaches the SCONE 470 to the packet to return the
4 state information to the second endpoint device 804. If no subsequent request is
5 made, the SCONE 470 remains on the router 810(1) until it expires and is
6 removed from memory.

7 According to a second implementation, the SCONE 470 is not kept at one
8 router, but instead is continuously routed among various network components
9 indefinitely or until timeout. In this example, the SCONE 470 may be circulated
10 among four routers 810(1), 810(2), 810(N), and 810(N+1), as represented by path
11 segments 814, 822, 824, and 826. If a subsequent connection between the first and
12 second endpoint devices is made, first router 810(1) to transport the message
13 issues a distributed query to the other routers 810(2), 810(N), and 810(N+1) to
14 locate the matching SCONE 470 if any. The SCONE 470 is subsequently
15 reassociated with a request and returned to the second endpoint 804 to restore state
16 information.

17 Bayeh fails to disclose the system of claim 28. Instead, Bayeh discloses a
18 system for maintaining sessions in a clustered server environment. The sessions
19 are maintained as “servlets”, which are small executable code objects used in
20 Java-based products. In the Background section, Bayeh noted that one such
21 product, the Java Web Server Toolkit from Sun Microsystems, only described a
22 session tracking facility for a single Web server. (*Bayeh*, col. 4, lines 61-64).
23 Hence, the goal of Bayeh was to extend session services to a clustered server
24 environment. (*Bayeh*, col. 8, lines 59-66).
25

1 Bayeh therefore describes a clustered server environment where multiple
2 Web servers 60, 62, and 64 are arranged behind a load-balancing host 59 to
3 receive and respond to incoming client requests 100, 101, and 102. (*Bayeh*, Fig. 3,
4 col. 8, lines 42-58). A servlet engine 70, 72, and 74 is provided at each Web
5 server. (*Bayeh*, col. 8, line 64 to col. 9, line 6). Bayeh describes that session
6 information used to respond to client requests can be maintained by the servlet
7 objects, and kept in a session pool for subsequent transactions. All of this occurs
8 at the server cluster behind the load-balancing host.

9 Accordingly, Bayeh is entirely silent as to the “stateless distributed
10 computer system” of claim 28, as Bayeh does not discuss or disclose “a network
11 having one or more network components to route requests from a first endpoint
12 device to a second endpoint device” where “the network [is] configured to
13 maintain the state information and to reassociate the state information with a
14 subsequent request from the first endpoint device to the second endpoint device”
15 as required by claim 28. Instead, Bayeh’s architecture merely describes
16 maintaining state information at a server cluster. Nowhere does Bayeh ever show
17 or consider a network between the client(s) and the server cluster (e.g., a network
18 between the client(s) and the load-balancing host in Fig. 3), where the network
19 itself maintains the state information.

20 The Office argues that “Bayeh teaches network components to route
21 requests and replies to endpoints” at column 8, lines 51-54. This excerpt from
22 Bayeh merely notes that requests are received from clients at the load-balancing
23 host 59, as shown in Fig. 3. Presumably, the requests are routed over a network,
24 although Bayeh does not directly address that point in the excerpt.
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1 The Office then states, however, that “Bayeh teaches wherein a reply
2 contains state information pertaining to a second endpoint, col. 10-11, lines 67-69,
3 as a ‘session object’, col. 4, lines 4-8. Bayeh teaches the network configured to
4 maintain state information as ‘session pools’ and reassociate the state information
5 with subsequent requests between the two endpoints, col. 11, lines 3-8”. This is
6 where the Office’s analysis, when applied to the system of claim 28, further breaks
7 down.

8 Bayeh’s architecture maintains the state information at the server. As
9 correctly pointed out by the Office, the state information is maintained in objects
10 and stored in session pools for later transactions. Essentially, the state information
11 is always maintained at the second endpoint (i.e., the server cluster). However,
12 contrary to the Office’s analysis, the state information is never passed back to the
13 network between the second endpoint (i.e., the server cluster) and the first
14 endpoint (i.e., the client).

15 As recited in claim 28, the first endpoint originates requests that are routed
16 over the network to a second endpoint, which then generates replies that are routed
17 back over the network to the first endpoint. (This is further described, for
18 example, with reference to the implementation of Fig. 8 in the subject application).
19 In the context of Bayeh, the second endpoint would be the server cluster of Fig. 3
20 and the first endpoint would be the client (not shown in Fig. 3 of Bayeh). Bayeh
21 never shows nor discusses the network between the clients and sever cluster (i.e.,
22 the “network having one or more network components to route requests from a
23 first endpoint device to a second endpoint device and to route replies from the
24 second endpoint device back to the first endpoint device” of claim 28). Therefore,
25 Bayeh fails to address a network that is “configured to maintain the state

1 information and to reassociate the state information with a subsequent request
2 from the first endpoint device to the second endpoint device.”

3 For these reasons, claim 28 is allowable over Bayeh. Applicant
4 respectfully requests that the § 102 rejection be withdrawn.

5 **Dependent claims 29 and 30** depend from claim 28 and are allowable by
6 virtue of this dependency. Moreover, these claims recite features that, when taken
7 together with those of claim 28, define systems not disclosed by Bayeh.

8 For example, **claim 29** recites that “at least one of the network components
9 stores the state information.” **Claim 30** recites that “multiple network components
10 continually route the state information amongst themselves to preserve the state
11 information.” Neither of these implementations is described in Bayeh.

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13 **New Claims**


14 New **claims 48-64** are believed to be allowable over the cited art of record.
15 Applicant respectfully requests consideration and allowance.
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1 **Conclusion**

2 Claims 28-30 and 48-64 are in condition for allowance. Applicant
3 respectfully requests reconsideration and prompt allowance of the subject
4 application. If any issue remains unresolved that would prevent allowance of this
5 case, **the Examiner is requested to contact the undersigned attorney to resolve**
6 **the issue.**

7
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9 Date: Nov 10, 2004

Respectfully Submitted,

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